REMARKS

Claim Objections

Claims 15, 16, 18 and 19 have been amended to correctly identify their dependency. Amended claims 15 and 16 now depend from amended independent claim 1, and amended claims 18 and 19 now depend from amended claim 7, and, accordingly, the informalities are believed to have been corrected.

Claim Rejections - 35 USC § 112

Claims 1-13, 15, 16, 18 and 19 are rejected under 35 USC § 112, first paragraph, as "containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention." Specifically, the examiner asserts that "The higher metal density as by forging being *only* at the splines is considered new matter." (emphasis supplied)

Independent claims 1 and 7 had been amended to remove limitations claiming first and second densities within the nut body wherein the spline density is claimed to be higher than that of the nut body itself. These amendments are believed to comply with the requirements of the examiner in removing new matter from the claims, and amended claims 1 and 7 are believed allowable under 35 USC § 112, first paragraph.

Claims 2-6, 8-13, 15, 16, 18 and 19 are directly or indirectly dependent upon either amended claim 1 or amended claim 7 and are, thus, for the same reasons believed to be allowable under 35 USC § 112, first paragraph.

Claim Rejections - 35 USC § 103

Claims 1, 3-7, 9-13, 15, 16, 18, and 19 are rejected under 35 USC § 103(a) as being unpatentable over Hollinger (US Pat. No. 3316952) in view of Wesley (US Pat. No. 2,378,610).

In order for a claimed invention to be rejected on obviousness, the prior art must suggest the modifications sought to be patented. In re Gordon, 221 U.S.P.Q. at 1127; ACS Hospital System, Inc. v. Montefiore Hospital, 221 U.S.P.Q. at 933.

As discussed in an interview with the examiner on February 7, 2005, independent article claim 1 and independent method claim 7 claim invention structure and method limitations not taught by Hollinger in view of Wesley, and more specifically not taught by the combination of these two references. Amended claims 1 and 7 define ***forged*** *triangular* splines with *forged* planar sidewalls forming *forged* pointed linear engagement edges *parallel* to the central axis and *extending* from the top surface to the actuating wall (thus, through the *entire aperture*), further forming *triangular spline voids*, the engagement edges arrayed with a *pitch value per inch* of *between about 10 to about 24*.

These structures and methods are not taught by Hollinger in view of Wesley. As discussed in the previously filed Declaration under Rule 132 by inventor Theodore L. Wolf, Hollinger's teachings are comprehended and practiced in the arts conventionally as the forming insert-engaging structures through machining methodology. This results in forming the Hollinger structures through cutting techniques that inherently weaken the structure of the elements formed thereby and, in particular, in comparison to the forged structures claimed by the present invention. Hollinger does not teach forging and unambiguously fails to teach or claim the *forged* splines with the ***increased forged density*** structure of the present invention.

Though Wesley teaches small nut structures formed by "*stamping*" lightweight metals, and thus compressed metal structures, both Wesley, and the combination of Wesley and Hollinger, fail to teach the forged spline walls and edges claimed by the present invention:

(1.) Wesley's "projections" do not extend *throughout* his *entire* aperture to the top surface. A review of his figures clearly shows that his projections extend no further upward than the *bottom half* of his aperture. Moreover, Wesley's structures are *expressly limited* in dimension to avoid "tool breakage" in their fabrication. (See his figures and the second column, lines 29-43, and fourth column, lines 11 through 41.) Thus the examiner's assertion that the combination of Hollinger with Wesley can provide the *forged* structures claimed, having a height of *twice* that of Wesley's teachings *without* resulting in "tool breakage," is unsupported and clearly contrary to the possibilities taught by Wesley.

(2.) Moreover, Wesley also fails to teach engagement edges with pitch array dimensions as specifically claimed, with a *pitch value per inch of between about 10 to about 24*. The only example embodiment Wesley provides has an insert aperture with a 17/64 inch diameter and a 3/32 inch height, the nut bore diameter of 5/32 inch and the entire "nut blank" having a height under 5/16 inch (fourth column, lines 11 through 41.) And Wesley unambiguously *limits* the number of his insert-engaging "projections" to *"eight"*: as discussed above, more than eight will result in "tool breakage" in engaging the metal blank material and forming the projections. And since Wesley's eight projections are distributed through an insert aperture with a 17/64 inch (0.27 inch) diameter and, thus, a 0.83 inch circumference, the maximum pitch value per inch attainable through Wesley's teachings is 9.64, which is lower than the range of pitch values claimed by the present invention.

(3.) Combining Hollinger with Wesley does *not* provide the missing teachings. Hollinger's specification discusses "grooves or serrations 19'" without providing dimensions, and is *silent* with regard to triangular spline structures, providing no teachings on pitch count, let alone the specific pitch count range claimed by the present invention. The examiner relies only on Hollinger's Figure 1, which is a dimensionless stylized representation of his invention, with *no objective or dimensional support* to the examiner's contention of the specific pitch count teachings. Absent some graphical indication of scale as provided in 37 C.F.R. § 1.84(k)(2), the contention that Hollinger's Figure 1 teaches the pitch count claimed (a pitch value per inch of between about 10 to about 24) is unsupported. Hollinger does not teach this parameter, and as established above Wesley cannot, and therefore the *combination* of the references does not.

(4.) Moreover, the two references cannot be combined to teach the invention as claimed. Even *if* Hollinger did, in fact, teach extended splines of the pitch count claimed by the present invention, these teachings could not be combined with Wesley as Wesley unambiguously teaches away from the claimed triangular splines disposed through the entire length of the aperture with the specified pitch count. A prior art reference may be considered to teach away from an invention when "a person of ordinary skill upon reading the reference, would be discouraged from following the path set out in the reference, or would be lead in a direction divergent from the path that was taken by applicant." In re Gurley, 27 F3rd 551, 553; 31 USPQ 2d 1130, 1131 (Fed Cir 1994). As discussed above, the *maximum* pitch value taught by Wesley *without* causing

"tool breakage" is 9.64, which is lower than the range of pitch values claimed by the present invention. Therefore, Wesley cannot be modified to teach the structures claimed by the present invention, as such structures would result in "tool breakage" through his "stamping" processes.

Indeed, **any** prior art reference ***combination*** asserted to modify Wesley to teach extended splines with a pitch value per inch of between about 10 to about 24 as claimed would necessarily exceed the limits expressed as *possible* in the Wesley "stamping" teaching, and, therefore, teach away from Wesley. Therefore, the combination of Hollinger and Wesley fails to teach the invention defined by the claims before the examiner, and amended independent claims 1 and 7, and dependent claims 2-6 and 8, 9-13, 15, 16, 18 and 19, are believed to be allowable over 35 USC § 103(a) over Hollinger in view of Wesley.

New claims 21 and 22. The examiner has previously asserted that the claim limitations regarding the "threaded body length dimension about equal to the thread diameter" are not patentably distinct over structures taught by the prior art of record. As the allowability of amended claims 1 and 7 is not dependent upon the presence of these limitations, the claim limitations have been removed from the parent independent claims, and now appear in new dependent claims 21 and 22. Applicants still maintain their position of inventive novelty with respect to these limitations; however, as new claims 21 and 22 are believed to be allowable for other reasons (through the incorporation of limitations present in independent amended claims 1 and 7, respectively), the issue is believed moot.

In conclusion, claims 1-13, 15, 16, 18, 19, 21 and 22, as presently amended and filed and as previously filed or amended, now before the examiner, are believed to be in condition for allowance, and early notification thereof is respectfully requested.

Respectfully submitted,

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By: _____
Patrick J. Daugherty, Reg. No. 41,697
Driggs, Lucas, Brubaker & Hogg Co., L.P.A.
Customer No. 23266

PJD:cg